

WHAT IS CLAIMED

1 1. An apparatus for facilitating multimedia communication between a plurality of
2 endpoints over a packet based network, each respective endpoint sending a
3 compressed video output signal and receiving a compressed video input signal, having
4 at least one network interface to a packet-based network, the network interface
5 comprising:

6 a missing packets repair logical unit, said missing packets repair logical unit
7 handling missing packets and thereby maintaining continuity of a video stream and
8 reducing traffic over said network.

1 2. The network interface of claim 1, wherein the missing packets repair logical unit
2 further comprises:

3 a first analyzer that analyzes if a packet is missing;

4 a second analyzer that analyzes which Group Of Blocks (GOBs) are in the
5 missing packet; and

6 a repair unit that replaces the missing packets.

1 3. The apparatus of claim 1 wherein the network is a local area network.

1 4. The apparatus of claim 1 wherein the network is a wide area network.

1 5. The apparatus of claim 1 wherein the video stream is repaired during a video
2 stream receiving.

- 1 6. A system comprising:
 - 2 a network interface unit having
 - 3 a video stream repair unit that receives a video stream from a real time
 - 4 protocol unit, having
 - 5 a detector unit that detects missing packets,
 - 6 an analyzer unit that analyzes which video parts are missing,
 - 7 a replacement unit that
 - 8 receives
 - 9 an indication from the detector unit that packets are
 - 10 missing, and
 - 11 information from the analyzer unit, the information
 - 12 including which video parts are missing, and
 - 13 in response to receiving the indication and the information
 - 14 replaces a missing packets in a video stream during transmission of
 - 15 the video stream over a network as part of a receive process.

1 7. A method for repairing missing packets in video communication over a packet-based
2 network, the method comprising:

3 analyzing if at least one packet is missing;
4 determining which Group of Blocks (GOBs) are missing;
5 preparing new packets which will replace the GOBs; and
6 sending the new packets to a destination.

1 8. The method of claim 7 wherein the destination is a point remote from where the
2 analyzing occurs.

1 9. A method comprising:

2 transmitting a video session over a network; and
3 replacing a missing part from the video session while the video session is being
4 transmitted.

1 10. The method of claim 9 wherein the missing part is replaced in an intermediate node
2 during a receiving process that receives the video session.

1 11. The method of claim 10 further comprising detecting the missing part during the
2 receiving process.

1 12. The method of claim 11 wherein detecting the missing part includes detecting if a
2 part of the video session received is out of sequence

1 13. The method of claim 9 wherein replacing the missing part is dependent on the frame
2 type.

1 14. The method of claim 12 wherein:
2 each part of a video session has an ID number; and
3 analyzing which part is missing comprises
4 finding the ID number of the last received video session part , and
5 finding the ID number of a first video session part of a stream currently
6 being analyzed.

1 15. The method of claim 9 wherein the missing part is at least one GOB.

1 16. A computer usable storage medium having stored thereon a method comprising:
2 transmitting a video session over a network; and
3 replacing a missing part from the video session while the video session is being
4 transmitted.

1 17. The computer usable storage medium of claim 16 wherein the missing part is
2 replaced in an intermediate node during a receiving process that receives the video
3 session.

1 18. The computer usable storage medium of claim 17, the method further comprising
2 detecting the missing part during the receiving process.

1 19. The computer usable storage medium of claim 18 wherein detecting the missing part
2 includes detecting if a part of the video session received is out of sequence

1 20. The computer usable storage medium of claim 16 wherein replacing the missing part
2 is dependant on a frame type.

1 21. The computer usable storage medium of claim 19 wherein:
2 each part of a video session has an ID number; and
3 analyzing which part is missing comprises;
4 finding the ID number of the last received video session part , and
5 finding the ID number of a first video session part of a stream currently
6 being analyzed.

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1 22. The computer usable medium of claim 16 wherein the missing part is a packet.

1 23. The network interface of claim 1, wherein the missing packets repair logical unit
2 further comprises:

3 a first analyzer that analyzes if a packet is missing;

4 a second analyzer that analyzes which Slices are in the missing packet; and

5 a repair unit that replaces the missing packets.

1 24. A method for repairing missing packets in video communication over a packet-based
2 network, the method comprising:

3 analyzing if at least one packet is missing;

4 determining which Slices are missing;

5 preparing new packets which will replace the Slices; and

6 sending the new packets to a destination.

1 25. The method of claim 9 wherein the missing part is at least one Slice.